



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,880	02/19/2004	Tobin C. Island	2502187.991100	7731

7590 12/05/2006
LAW OFFICES OF JAMES E. EAKIN
P.O. Box 1250
Menlo Park, CA 94025

EXAMINER

JOHNSON III, HENRY M

ART UNIT	PAPER NUMBER
----------	--------------

3739

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,880

Applicant(s)

ISLAND ET AL.

Examiner

Henry M. Johnson, III

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 155-178 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 155-178 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 060806.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed September 3, 2006 have been fully considered but they are not persuasive. Slatkine clearly teaches the use of a diffuser to modify the divergent half angle of a laser to "provide a beam that is not injurious to an operator, observer...". The eye safety is based on ANSI Z 136.1 standards. The Accessible Energy Limit based on this standard is discussed with regard to energy density, exposure duration and wavelength. Safety limits based on ISO 15004:1997E are also discussed by Slatkine. This teaching is not limited by the size of the device or the type of emitter.

Information Disclosure Statement

Applicant should note that the large number of references in the attached IDS have been considered by the examiner in the same manner as other documents in Office search files are considered by the examiner while conducting a search of the prior art in a proper field of search. See MPEP 609.05(b). Applicant is requested to point out any particular references in the IDS which they believe may be of particular relevance to the instant claimed invention in response to this office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 158-161 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3739

Claim 158 is unclear as it is not clear how the temperature of the heat removing element is accomplished. When no beam is radiating and it is not in contact with the skin, the element would be influenced by the ambient temperature, a variable not related to structure.

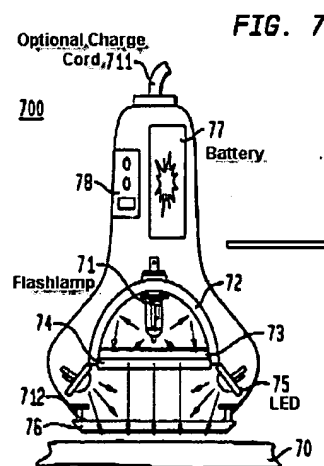
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 155-158, 162-169 and 173-178 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0225339 to Yaroslavsky et al. in view of WO 03/049633 to Slatkine. Yaroslavsky et al. teach a handheld light treatment device with a flashlamp (Fig. 7, # 71) and LEDs (Fig. 7, # 75) in a housing with a battery (Fig. 7, # 77) that may provide wavelengths from 900-1800 nanometers (abstract) at pulse



Art Unit: 3739

durations from 1 millisecond to 100 seconds and fluences from 10 to 500 J/cm² (paragraph 0023). The radiation is also disclosed as being provided by diode lasers, VCSEL's, laser arrays or fiber lasers (paragraph 0070). LEDs inherently have a divergent beam. Switching electronics (paragraph 0026) are disclosed for producing the pulses, such electronics implying an electronic circuit. An output window (heatsink) is disclosed (Fig. 7, # 76) at an exit aperture, the window may be cooled using various means including phase change materials and thermoelectric (paragraph 0094). A rechargeable battery is disclosed with a recharging capability (Fig. 7, # 77). The use of battery power and solid-state devices implies a direct drive circuit. Yaroslavsky et al. does not teach a diffuser. Slatkine teaches that when the divergent half angle of a beam is greater than 60 degrees, no protective eyeglasses are required (page 7, lines 7-18). The radiance is rendered below levels that are considered safe based on established standards (page 9, line 22 to page 10, line 2). The diverging of the beam can be accomplished by scattering, reflecting or diffusing the beam. Slatkine teaches the diffusing element may be sandblasting or etching a surface or by application of a thin sheet of a diffusing polymer to a glass plate (page 31), thus teaching the use of refraction and reflection to diffuse a beam. The location of the diffuser inside or outside the housing is considered an obvious design choice. It would have been obvious to one skilled in the art to use the diffusing element as taught by Slatkine in the invention of Yarborough to achieve an eye safe output as suggested by Slatkine.

Regarding claim 162, no additional structure is cited or implied in the intended use.

Regarding claim 164 (and 169), the reflecting area and filter of Yarborough are interpreted as a mixer as they are shown in Figure 7 to provide a uniform irradiation to the output window. The light guide of Slatkine can also be interpreted as a mixer as such guides are known to homogenize beams.

Art Unit: 3739

A recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987).

Claims 159-161 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0225339 to Yaroslavsky et al. in view of WO 03/049633 to Slatkine as applied to claim 158 above and further in view of U.S. Patent 6,273,885 to Koop et al. Neither Yaroslavsky et al. nor Slatkine teach a sapphire cooling window. Koop et al. teach a laser tissue treatment device capable of being handheld, the device comprising a semiconductor diode or diode array laser which emits energy and a device for surface cooling of tissue such that the energy is directed through said cooling device in contact with tissue. The diode laser operates at wavelengths between about 630 nm and 980 nm, and delivers a predetermined amount of energy in a predetermined period of time and having a predetermined spot size. A cooling device such as a sapphire plate or other active or passive cooling means is used to cool the tissue and may include a thermoelectric cooler (Col. 3, lines 60-65). The device is disclosed as flashlight sized with a weight of 675 grams. It would have been obvious to one skilled in the art to use a thermoelectric cooled sapphire window as taught by Koop et al. in the invention of Yaroslavsky et al. in view of Slatkine to cool the tissue as suggested by Koop et al. as the use of these elements is well known and pervasive in the art.

Art Unit: 3739

Regarding claim 161, the use of a fan in the cooling of plates or heat sinks of a Peltier unit is well known and obvious.

Claims 170-172 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication US 2004/0225339 to Yaroslavsky et al. in view of WO 03/049633 to Slatkine and further in view of U.S. Patent 6,273,885 to Koop et al. All have been previously discussed. It would have been obvious to one skilled in the art to use a thermoelectric cooled sapphire window as taught by Koop et al. in the invention of Yaroslavsky et al. in view of Slatkine to cool the tissue as suggested by Koop et al. as the use of these elements is well known and pervasive in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3739

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Henry M. Johnson, III
Primary Examiner
Art Unit 3739